

**SELECTION STATEMENT
FOR
INTERNATIONAL SPACE STATION DEWAR
RFP-NNG140516081R**

On November 21, 2014, I along with senior management of Satellite Servicing Capabilities Office (SSCO) from the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) met with members of the evaluation team to hear their findings based on the evaluation of proposals for the International Space Station (ISS) Dewar contract.

PROCUREMENT DESCRIPTION

The ISS Dewar requirement was issued as a full and open competitive procurement for a Dewar for use in a cryogenic experiment on the International Space Station. The instrumented Dewar will be integrated with a receiver tank, and used in a demonstration of the storage and transfer of liquid methane in zero g. All work will be conducted off-site at the Contractor's facilities with the delivery being accepted at NASA GSFC.

EVALUATION PROCEDURES

The Request for Proposals (RFP) defined the evaluation factors as Mission Suitability, Cost and Past Performance. The RFP specified the relative order of importance of the evaluation factors as follows:

"The Cost Factor is approximately equal in importance to the combined importance of the Mission Suitability Factor and the Past Performance Factor. As individual Factors, the Cost Factor is the most important and the Mission Suitability Factor is more important than the Past Performance Factor."

The RFP provided that each Offeror's Mission Suitability proposal would be evaluated and point scored. This procedure required the Government to evaluate proposals under each subfactor, identifying Significant Strengths, Strengths, Weaknesses, Significant Weaknesses, or Deficiencies; to assign an adjectival rating for each subfactor based on the findings; to determine a percentile score for each subfactor based on the findings; and to calculate a total point score for the Mission Suitability factor using the weighted sum of subfactor scores. In this regard, the RFP defined Mission Suitability as consisting of the following subfactors and assigned points to each as indicated:

| SUBFACTOR | | POINTS |
|-----------|----------------------------|--------|
| A | Technical Approach | 700 |
| B | Management Approach | 200 |
| C | Small Business Utilization | 100 |
| TOTAL | | 1000 |

Regarding the Cost Factor, the RFP stated that the cost evaluation would be conducted in accordance with FAR 15.305(a)(1) and NFS 1815.305(a)(1)(B). Offerors were referred to FAR 2.101(b) for a definition of “cost realism” and to FAR 15.404-1(d) for a discussion of “cost realism analysis” and “probable cost”. The proposed costs in the cost exhibits and the rates proposed in the Direct Labor Rates, Indirect Rates and Fixed Fee Matrices would be assessed to determine reasonableness and cost realism. The proposed costs would be presented to the Source Selection Authority, along with any issues and risks associated with the Direct Labor Rates, Indirect Rates and Fixed Fee Matrices.

For the Past Performance Factor, the RFP stated the past performance evaluation would be conducted in accordance with FAR Part 15. For a prime contractor’s contract reference(s) to be considered at least minimally “relevant”, it must meet/exceed a total cost/fee incurred of at least \$250,000. A proposed significant subcontractor for this procurement is defined as any proposed subcontractor that is estimated to meet/exceed a total cost/fee of \$150,000. For a significant subcontractor’s contract reference(s) to be considered at least minimally “relevant”, it must meet/exceed a total cost/fee incurred of at least 25% of that portion of this procurement that the subcontractor is proposed (or estimated) to perform) would be evaluated to determine initial relevance and subsequently the degree of relevance based on size, content, and/or complexity. In evaluating Past Performance, the NASA evaluation team relied on telephone and written responses received on recent Past Performance questionnaires, the government-wide Past Performance Information Retrieval System (PPIRS) database, in addition to the narrative on relevant past/current contracts provided by the offerors. The Past Performance factor was not point scored, but was assigned an adjectival rating of “Very High Level of Confidence”, “High Level of Confidence”, “Moderate Level of Confidence”, “Low Level of Confidence”, “Very Low Level of Confidence”, or “Neutral”.

EVALUATION PROCESS

The NASA Evaluation Team (ET) consisted of a team of technical and business members and consultants from appropriate disciplines, to assist in proposal evaluation. NASA issued the RFP on August 27, 2014.

The following companies submitted initial proposals by the October 3, 2014 due date:

Lockheed Martin, (Palo Alto, CA)
Space Dynamics Lab (North Logan, UT)
Meyer Tool and Manufacturing (Oak Lawn, IL)

The ET reviewed each Offeror’s Mission Suitability proposal, reached consensus on findings, rated and scored each subfactor, applied the established numerical weights, and produced an overall Mission Suitability score for each proposal. To arrive at the level of confidence rating for Past Performance, the ET relied on the performance data provided

in each proposal and information obtained for the relevant contracts identified in the proposals, as well as other past performance information available to the ET. The ET also evaluated each Offeror's cost and arrived at a probable cost to the Government. In addition to the evaluation of the factors and subfactors identified above, the ET ensured all solicitation requirements were met.

The ET presented its initial findings to the SSA on November 21, 2014. The findings were presented to the SSA as follows:

MISSION SUITABILITY EVALUATION

After evaluating each subfactor in accordance with the weights delineated in the RFP, the evaluation team rated the proposals in the following order, based on their total Mission Suitability score:

1. Lockheed Martin
2. Space Dynamics Laboratory
3. Meyer Tool and Manufacturing

The table below provides the adjectival ratings assigned in each Mission Suitability Subfactor for the three ISS Dewar proposals.

| Subfactor Adjectival Ratings | | | |
|-------------------------------------|-------------------|------------|------------------------|
| Subfactor | Meyer Tool | SDL | Lockheed Martin |
| A – Technical Approach | Good | Very Good | Excellent |
| B – Mgmt App | Fair | Very Good | Very Good |
| C – SBU | Very Good | Fair | Good |

Numerical scoring was based on the above assigned adjectival ratings, as prescribed in the RFP. The total Mission Suitability score for each offeror is shown below, from the highest to the lowest.

| Mission Suitability Scoring | |
|------------------------------------|-----------------------------|
| Offeror | Total Points Awarded |
| Lockheed Martin | 915 |
| Space Dynamics Laboratory | 860 |
| Meyer Tool and Manufacturing | 595 |

The substance of the team's evaluation of Mission Suitability for the Offeror's proposal is presented below:

Lockheed Martin

Under Subfactor A of Mission Suitability, Lockheed received an adjectival rating of “Excellent” with one significant strength, three strengths, no weaknesses, no significant weaknesses, and no deficiencies.

Lockheed received a significant strength for the thorough detailed and comprehensive discussion of thermal, structural and parts selection issues for flight cryogenic systems, allowing them to provide a low risk technical approach.

Lockheed received one strength for the conceptual design that leveraged the WIRE design, demonstrating a very good understanding of the requirements.

Lockheed received a second strength for a detailed discussion of the technical risks on the project, identifying and justifying mass and thermal performance as the most significant challenges.

Lockheed’s third strength was that, with their detailed conceptual design, they were able to make a mature weight estimate, and offered an enhanced tank volume, an added value to the government.

Under Subfactor B, Lockheed Martin received an adjectival rating of “Very Good” with one significant strengths, two strengths, no significant weakness, no weaknesses, and no deficiencies.

Lockheed received a significant strength for their Mission Assurance Plan, proactively submitted with the proposal rather than after award. The MAP was thorough and detailed, demonstrating a very good understanding of NASA mission assurance requirements, thereby reducing technical risk.

Lockheed received a strength for the thorough and comprehensive discussion of their approach to selecting subcontractors and suppliers;

Lockheed received a second strength for their proposed program organization which was clear and effective. Their proposed program staffing was extensive and comprehensive.

Under Subfactor C, Lockheed received an adjectival rating of “Good” with no significant strength, one strength, two weaknesses, no significant weakness, and no deficiencies.

Lockheed received one strength for providing a comprehensive discussion on how they would solicit subcontracting efforts to a variety of small businesses and the amount that would be subcontracted out to small businesses.

Lockheed received a weakness for referencing an expired Master Subcontracting Plan.

Lockheed received a second weakness for not providing a Small Business Subcontracting Plan that clearly addressed all the requirements as specified in FAR 19.704 – Subcontracting Plan Requirement.

Space Dynamics Laboratory

Under Subfactor A of Mission Suitability, Space Dynamics Laboratory received an adjectival rating of “Very Good” with one significant strength, two strengths, one weakness, no significant weaknesses, and no deficiencies.

SDL received a significant strength for the excellent discussion of cryocooler selection and integration, which included a proposed thermal switch that could significantly reduce technical risk.

SDL received one strength for a very good understanding of the requirements as demonstrated by their conceptual design, with a very innovative proposal for a hexane guard tank for added hold time.

SDL received a second strength for a very good discussion and rationale associated with the prioritized requirements within the Statement of Work.

SDL received a weakness for failing to address the technical risks associated with aluminum pressure vessel fabrication.

Under Subfactor B, Space Dynamics Laboratory received an adjectival rating of “Very Good” with one significant strength, one strength, one weakness, no significant weaknesses, and no deficiencies.

SDL received a significant strength for their Mission Assurance Plan and Quality Manual, proactively submitted with the proposal rather than after award. The MAP and Manual were both thorough and detailed, demonstrating a very good understanding of NASA mission assurance requirements, thereby reducing technical risk.

SDL received a strength for the proposed program organization which is compact and effective, with highly experienced personnel.

SDL received a weakness for their limited rationale regarding the make-or-buy decision for the tank and vacuum jacket.

Under Subfactor C, Space Dynamics Laboratory received an adjectival rating of “Fair” with no significant strengths, no strengths, three weaknesses, no significant weakness, and no deficiencies.

SDL was given a weakness for providing an outdated Small Business Subcontracting Plan that is not specific to this requirement.

SDL was given a second weakness for not providing a complete discussion, addressing all areas under the “Commitment to Small Businesses”.

Lastly, SDL was given a third weakness for not proposing any subcontracting goals; their reasoning was “due to the nature of the work to be performed under this contract, USU Research Foundation will not be utilizing any subcontracting efforts to small or large business concerns.” SDL did not provide any additional information to help support their reasoning for not providing goals.

Meyer Tool and Manufacturing

Under Subfactor A of Mission Suitability, Meyer Tool received an adjectival rating of “Good” with no significant strengths, one strength, four weaknesses, no significant weaknesses, and no deficiencies.

Meyer Tool received one strength for the comprehensive and detailed discussion of the capability of its facilities and special equipment. Based on their fabrication and test capabilities, they offered a better leak rate than specified.

Meyer Tool received one weakness for failing to address in sufficient detail the very difficult 2W heat leak requirement.

Meyer Tool received a second weakness for their discussion where a description of the likely MLI configuration was provided, but the allowed effective emissivity would result in a very high heat leak, suggesting a lack of understanding of the requirements.

Meyer Tool received a third weakness for their discussion where the load requirements of Specification Sec 3.6 were repeated, but did not show an understanding of how their stainless steel support tubes would be correctly sized for these loads.

Meyer Tool received a fourth weakness for failing to submit a proposed time schedule for performance by phases or parts of the program with interrelationships among phases, as required in the solicitation Section L.22.

Under Subfactor B, Meyer Tool received an adjectival rating of “Fair” with no significant strengths, no strengths, one weakness, no significant weaknesses, and no deficiencies.

Meyer Tool received a weakness for providing a Safety and Health Plan that outlined the company’s approach to compliance with several regulatory compliance programs, but the plan did not follow NASA guidelines per Appendix E of NPR 8715.3C, which is unacceptable.

Under Subfactor C, Meyer Tool received an adjectival rating of “Very Good” with one significant strength, no strengths, one weakness, no significant weaknesses and no deficiencies.

Meyer Tool, as a small business, was not required to submit a Small Business Utilization Plan. A significant strength was provided to Meyer Tool for proposing that they would complete the requirement without subcontracting any portions out in their proposal, specifically in Subfactors A and B. This could put utilization of the contract by a small business at 100%.

Meyer Tool received a weakness for not providing any of the SBU discussion in the designated Subfactor C- Small Business Utilization area. Meyer erroneously deemed the section as non-applicable since they are a small business.

COST EVALUATION

The offerors’ proposed costs of the SOW and the rates proposed in the Direct Labor Rates, Indirect Rates and Fixed Fee Matrices were assessed to determine reasonableness and cost realism. The evaluation was conducted in accordance with FAR 15.305(a)(1) and NFS 1815.305(a)(1)(B). The cost realism analysis was the basis of the determination of the probable cost for each offeror to perform the effort. (FAR 2.101(b) refers to the definition of “cost realism” and FAR 15.404-1(d) refers to a discussion of “cost realism analysis” and “probable cost”).

In conducting its evaluation, the ET evaluated the estimated proposed cost elements to determine if the cost elements were realistic for the work to be performed, reflect a clear understanding of SOW requirements, and were consistent with the unique methods of performance (technical and management approach and utilization of proposed personnel) and materials described in the offeror's technical proposal. The ET had the direct and indirect rates verified by either DCAA or cost supporting data provided by the offeror. After the ET’s evaluation, calculation anomalies and mission suitability weaknesses leading to probable cost adjustments were found.

Meyer Tool had the lowest proposed and probable costs. SDL’s proposed cost was approximately \$1.1 M higher than Meyer’s proposed cost and Lockheed’s was approximately \$2.7 M higher than Meyer’s proposed cost. SDL’s probable cost was approximately \$400k higher than Meyer’s, and Lockheed’s was approximately \$1.8M higher than Meyer’s.

The ET found that the costs proposed by Lockheed and SDL were realistic for the work to be performed, while Meyer Tool’s costs were not considered realistic.

Meyer Tool and Manufacturing

Under the cost volume, Meyer Tool's basis of estimate did not contain the level of detailed information as required nor was the cost clearly tied to the WBS.

The reasonableness of the proposed costs were not substantiated by the proposal. The proposed number of engineering and design hours were significantly lower than experienced by NASA from previous flight systems, and there was insufficient information to substantiate the proposed hours.

Consequently, the Government evaluation team determined that the cost risk for Meyer Tool and Manufacturing to be high. The ET adjusted Meyer Tool's proposed cost significantly upward to estimate their probable cost.

Space Dynamics Laboratory

In SDL's cost proposal, minimal probable cost adjustments were made. The Government evaluation team determined the estimated proposed cost elements for SDL were realistic for the work to be performed, reflected a clear understanding of SOW requirements, and were consistent with the unique methods of performances and materials described in the offeror's technical proposal. Consequently, the Government evaluation determined that the cost risk for SDL was low, and adjusted their proposed cost upward by less than 10% to estimate their probable cost.

Lockheed Martin

In Lockheed's cost proposal, minimal probable cost adjustments were made. The Government evaluation team determined the estimated proposed cost elements for Lockheed were realistic for the work to be performed, reflected a clear understanding of SOW requirements, and were consistent with the unique methods of performances and materials described in the offeror's technical proposal. Consequently, the Government evaluation determined that the cost risk for Lockheed was low, and made minimal probable cost adjustments.

PAST PERFORMANCE EVALUATION

In evaluating Past Performance, the ET gave Lockheed and SDL an overall rating of "Very High Level of Confidence", and Meyer Tool an overall rating of "High Level of Confidence". All three offerors received very high performance ratings from their customers. Lockheed and SDL demonstrated significantly relevant experience on the size and content of the contract with respect to this acquisition. Meyer's past performance was at a slightly lower level of complexity and technical relevance.

DECISION

In addition to the presentation materials, I carefully reviewed the Government evaluation team's detailed cost and technical evaluation reports. I also reviewed the evaluation criteria, which stated that the Cost Factor is approximately equal in importance to the combined importance of the Mission Suitability Factor and the Past Performance Factor. As individual Factors, the Cost Factor is the most important and the Mission Suitability Factor is more important than the Past Performance Factor.

Regarding the Mission Suitability evaluation, I reviewed the Significant Strengths, Strengths, and Weaknesses associated with all three offerors and agree with the Government evaluation team's assignment of Significant Strengths, Strengths, and Weaknesses based on the relative benefit and value of the various proposal features. Lockheed received an adjectival rating of "Excellent" and SDL received an adjectival rating of "Very Good" for Subfactor A, with a "Good" for Meyer Tool. Lockheed and SDL each received adjectival ratings of "Very Good" for Subfactor B; whereas Meyer Tool received an adjectival rating of "Fair". Despite the differences in findings between the offerors, I did not find any significant advantages between Lockheed and SDL in this Subfactor, but did find their approaches superior to Meyer Tool's approach. SDL received an adjectival rating of "Fair" for Subfactor C, while Meyer Tool received an adjectival rating of "Very Good", and Lockheed a "Good".

Overall, while Lockheed received a somewhat higher Mission Suitability score, which was consistent with their proposal receiving slightly more Significant Strengths, and Strengths, I did find some compelling discriminators between the Lockheed and SDL within the Mission Suitability factor; however I did feel that both offerors were superior to Meyer Tool. I note SDL's "Fair" rating in Subfactor C, which reflects the three assessed weaknesses, but most particularly the offerors' decision to perform the contract in-house. While this is reflected in the overall score, and was a factor in my trade off analysis, I do not regard it as a significant impediment to successful performance. Therefore, the Mission Suitability factor was a discriminator in my selection decision.

In evaluating Past Performance, the Government evaluation team gave all three offerors at least an overall rating of "High Level of Confidence". Each received very high performance ratings from their customers and each substantiated recent and relevant contractual performance. Lockheed and SDL demonstrated experience of particular relevance in content, complexity and technical responsibility, marginally above that of Meyer in relation to the requirements of this solicitation. Therefore, the Past Performance factor was only a minor discriminator in my selection decision.

Regarding the cost evaluation, the Government evaluation team found the Meyer Tool proposal to be significantly lower than the Lockheed proposal and SDL proposal in both the proposed and probable costs. The Government evaluation team made relatively major probable cost adjustments to Meyer Tool, based on likely labor hours, but made only minor probable cost adjustments to both Lockheed and SDL. There was a low level of cost risk associated with both Lockheed and SDL, and I agree with the Government evaluation team's findings that both offerors submitted reasonable and realistic cost

proposals. The Government evaluation team did find that there was a high risk associated with Meyer Tool's cost proposal. Both SDL and Lockheed provided adequate substantiation of their proposed cost and a well-documented BOE, while MTM was not able to provide substantiation of their cost, and additionally had much less BOE substantiation. I find the cost difference between the offerors to be a meaningful discriminator in my selection.

In summary, I concluded that Lockheed was superior to SDL under the Mission Suitability Factor; however both Lockheed and SDL are significantly superior to Meyer Tool. All three offerors were essentially similar under the Past Performance Factor; however, Mission Suitability was a discriminator in my decision regarding Meyer Tool, notwithstanding that Meyer offered a lower proposed and probable cost than both Lockheed and SDL. Considering the Cost Factor, I agree with the Government evaluation team's finding that the costs proposed by SDL were reasonable and realistic and illustrated a clear understanding of the requirements as opposed to those proposed by Meyer Tool which were determined to be a high risk. Further, the costs submitted by Lockheed also were considered reasonable and realistic. I do agree that Lockheed offers a slight advantage over SDL and Meyer under Mission Suitability; however SDL's proposed cost outweighs it. I also specifically note that while SDL received only an evaluation of "Fair" in subfactor C, this is mitigated by the relative importance of that subfactor, and the impact it had on the overall Mission Suitability score is outweighed by the significant price advantage offered by SDL. Therefore, after considering the importance of the individual evaluation factors, where cost is approximately equal in combined importance to mission suitability and past performance, and the most important as an individual factor; I have, based on my review, concluded that SDL's proposal represents the best value to NASA. Consequently, I have selected SDL for the award of the International Space Station (ISS) Dewar contract.



Frank Cepollina
Source Selection Authority

12/17/14

Date